ZEROAVIA RECEIVES FAA G-1 FOR 600KW ELECTRIC PROPULSION SYSTEM

News / Manufacturer



ZeroAvia has reached consensus on the Certification Basis relating to its 600kW electric propulsion system with the FAA, having received a G-1 Issue Paper (stage 2) and formally confirmed agreement with its contents. The G-1 represents a key milestone on the journey towards final certification of the company's EPS with the U.S. regulator, and also on its path to certifying its first full hydrogen-electric powertrain with the UK Civil Aviation Authority. The issue paper designates the applicable airworthiness regulations specific for ZeroAvia's EPS, allowing the company to validate its design requirements.

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Val Miftakhov, ZeroAvia Founder and CEO, commented: “While hydrogen-electric is the future for the majority of commercial routes in existence today, advances in electric propulsion technology and novel aircraft design are opening up an exciting range of new shorter range, electric air mobility applications. Certifying and selling our 600kW electric propulsion system helps ZeroAvia expand our addressable market and increase our impact in pursuit of a clean future of flight. With nearly 3000 orders for our full powertrains and components, achieving a first certification will be a monumental achievement for our team and for the aviation industry, unlocking clean, efficient and affordable air transport all over the world.”

ZeroAvia 600kW EPS combines the company’s proprietary inverter and electric motor technology to deliver a highly efficient electric engine with exceptional fault tolerance and specific power. The 600kW EPS system comprises four ZeroAvia 200kW continuous power bidirectional inverters converting DC power to AC to supply ZeroAvia’s direct drive motor, capable of 2,200 rpm. Potential applications for the 600kW EPS include battery, hybrid and fuel cell electric fixed-wing aircraft, rotorcraft and Unmanned Aerial Vehicles.

The 600kW system was designed as part of ZeroAvia’s wider ZA600hydrogen-electric powertrain, designed for up to 20 seat commercial aircraft. By advancing the aerospace applicability and performance of power electronics and electric motors, the company is progressing discussions to supply the electric propulsion system separately to other clean aviation innovators. Last year ZeroAvia opened a 136k sq ft Propulsion Center of Excellencet in Everett, WA to produce these electric propulsion systems. The electric propulsion system is one part of the company’s deep portfolio of fuel cell, power electronics and electric motor technology developed thanks to a strong commitment to vertical integration, and ZeroAvia launched component offering to serve the market for novel electric air transport applications in May 2024.

ZeroAvia has already extensively tested a prototype of the ZA600 hydrogen-electric engine aboard a Dornier 228 aircraft at its UK base. The company has an engineering partnership with Textron Aviation as it looks to secure a supplemental type certificate for the Cessna Grand Caravan as the launch airframe for the ZA600.

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